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Health Safety & Environmental Solutions for Business & Industry

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Hand Arm Vibration; Daily Points Exposure Guide ©

Under the Vibration at Work Regulations 2005 employers must ensure that employees are not exposed to harmful levels of Hand Arm Vibration (HAV). This chart has been developed by HSE Solutions Ltd and Vibrotag Ltd to assist you to ensure compliance.

The Vibration at Work Regulations set two key values after which action must be taken. These are the Exposure Action Value (EAV) of an A(8) of 2.5 ms^2 and an Exposure Limit Value (ELV) of an A(8) of 5.0ms^2. Using the point system below these levels equate as follows. The EAV equals 100 points and the ELV equals 400 points. If you wish discuss the requirements at each of these levels or wish training, assessments are your equipment to be assessed contact HSE Solutions Ltd at www.hse-solutions.co.uk. or telephone 0141 332 3199

To use chart

1. Identify machine vibration level on the left.
2. Compare the time of use with those at the bottom of the chart.
3. The point at which they meet indicates the operator's "Daily Exposure in points".
4. Compare this with the limit values on the right to identify action required.

Example

If a machine has a vibration level of 5m/s^2 and it is used for ½ hour the operator would have been exposed to 25 points. If they then used another tool at 7.5 m/s^2 for 45 minutes they would have been exposed to 74 points, thus 99 points in total. This can then be compared against the column on the right to see that this is below the EAV.

Vibrotag® provides a vibration exposure management system that allows the designation of exposure points dependent on the time of use. This makes it easy to calculate overall exposure when using more than one machine. The range of colour coded Vibrotag® can also be attached to the tool to display an immediate visual reference of the HAV risk level associated with each piece of equipment. More information on the unique system can be seen at www.vibrotag.com.

Vibration Level in m/s^2	1/4	1/2	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/4	3 1/2	3 3/4	4	4 1/4	4 1/2	4 3/4	5	5 1/4	5 1/2	5 3/4	6	6 1/4	6 1/2	6 3/4	7	7 1/4	7 1/2	7 3/4	8	
34																																	
32	512																																
30	450																																
28	392	784																															
26	338	676																															
24	288	576																															
22	242	484	726																														
20	200	400	600																														
19	181	361	542																														
18	162	324	486																														
17	145	289	434	578																													
16	128	256	384	512																													
15	113	225	338	450	563																												ELV
14	98	196	294	392	490																												
13	85	169	254	338	423	507																											
12	72	144	216	288	360	432	504																										
11	61	121	182	242	303	363	424	484																									
10	50	100	150	200	250	300	350	400	450																								
9.5	45	90	135	181	226	271	316	361	406	451																							
9	41	81	122	162	203	243	284	324	365	405	446																						
8.5	36	72	108	145	181	217	253	289	325	361	397	434	470																				
8	32	64	96	128	160	192	224	256	288	320	352	384	416	448	480																		
7.5	28	56	84	113	141	169	197	225	253	281	309	338	366	394	422	450	478																
7	25	49	74	98	123	147	172	196	221	245	270	294	319	343	368	392	417	441	466														
6.5	21	42	63	85	106	127	148	169	190	211	232	254	275	296	317	338	359	380	401	423	444	465	486										
6	18	36	54	72	90	108	126	144	162	180	198	216	234	252	270	288	306	324	342	360	378	396	414	432	450	468	486						
5.5	15	30	45	61	76	91	106	121	136	151	166	182	197	212	227	242	257	272	287	303	318	333	348	363	378	393	408	424	439	454	469	484	EAV
5	13	25	38	50	63	75	88	100	113	125	138	150	163	175	188	200	213	225	238	250	263	275	288	300	313	325	338	350	363	375	388	400	
4.5	10	20	30	41	51	61	71	81	91	101	111	122	132	142	152	162	172	182	192	203	213	223	233	243	253	263	273	284	294	304	314	324	
4	8	16	24	32	40	48	56	64	72	80	88	96	104	112	120	128	136	144	152	160	168	176	184	192	200	208	216	224	232	240	248	256	
3.5	6	12	18	25	31	37	43	49	55	61	67	74	80	86	92	98	104	110	116	123	129	135	141	147	153	159	165	172	178	184	190	196	
3	5	9	14	18	23	27	32	36	41	45	50	54	59	63	68	72	77	81	86	90	95	99	104	108	113	117	122	126	131	135	140	144	
2.5	3	6	9	13	16	19	22	25	28	31	34	38	41	44	47	50	53	56	59	63	66	69	72	75	78	81	84	88	91	94	97	100	
2	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	
1.5	1	2	3	5	6	7	8	9	10	11	12	14	15	16	17	18	19	20	21	23	24	25	26	27	28	29	30	32	33	34	35	36	
1	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9	10	10	11	11	12	12	13	13	14	14	15	15	16	16	
0.5	0	0	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	

Time of use in 1/4 hour increments